

WHAT IS CLAIMED IS:

1. A surface acoustic wave device comprising:  
a piezoelectric substrate;  
5 an electrode unit for exciting a surface acoustic wave  
on a surface of said piezoelectric substrate; and  
reflectors for reflecting the surface acoustic wave at  
said reflectors, wherein:  
said electrode unit comprises interdigital electrodes  
10 including a thin-film layer formed of copper or a copper  
alloy, and a connecting electrode connected to each of the  
interdigital electrodes; and  
when the wavelength of the surface acoustic wave is  
indicated by  $\lambda$ , and when the thickness of the interdigital  
15 electrodes is indicated by  $H$ , the standardized thickness  $H/\lambda$   
of the interdigital electrodes ranges from 0.045 to 0.070,  
and said piezoelectric substrate is a rotated Y-cut  $\text{LiTaO}_3$   
substrate whose cut angle  $\theta$  from the Y axis to the Z axis  
around the X axis ranges from  $52.0^\circ$  to  $58.0^\circ$ , the surface  
20 acoustic wave propagating in the direction of the X axis of  
said piezoelectric substrate.
2. A surface acoustic wave device according to claim 1,  
wherein the standardized thickness  $H/\lambda$  of the interdigital  
25 electrodes ranges from 0.050 to 0.065, and said piezoelectric  
substrate is a rotated Y-cut  $\text{LiTaO}_3$  substrate whose cut angle  
 $\theta$  from the Y axis to the Z axis around the X axis ranges from  
 $52.4^\circ$  to  $58.0^\circ$ .

3. A surface acoustic wave device comprising:  
a piezoelectric substrate;  
an electrode unit for exciting a surface acoustic wave  
5 on a surface of said piezoelectric substrate; and  
reflectors for reflecting the surface acoustic wave at  
said reflectors, wherein:  
said electrode unit comprises an interdigital electrodes  
including a thin-film layer formed of copper or a copper  
10 alloy, and a connecting electrode connected to each of the  
interdigital electrodes; and  
when the wavelength of the surface acoustic wave is  
indicated by  $\lambda$ , and when the thickness of the interdigital  
electrodes is indicated by H, the standardized thickness  $H/\lambda$   
15 of the interdigital electrodes ranges from 0.050 to 0.065,  
and said piezoelectric substrate is a rotated Y-cut  $\text{LiTaO}_3$   
substrate whose cut angle  $\theta$  from the Y axis to the Z axis  
around the X axis ranges from  $50.0^\circ$  to  $59.5^\circ$ , the surface  
acoustic wave propagating in the direction of the X axis of  
20 said piezoelectric substrate.